Building Number: **638**
Area: West Barracks
Date of Construction: 1904
Period of Significance: 1900-1919
(per HSR Part One)
Historic Use: Barracks
Current/Recent Use: Office

Occupancy: R-1 then B
Hazard Level: Not Available
Number of Floors: Two and a half stories

Basement Floor: 13,338 sq. ft. (per January 2000 SERA report)
First Floor: 13,338 sq. ft. (per January 2000 SERA report)
Second Floor: 13,338 sq. ft. (per January 2000 SERA report)
Exterior Materials: Beveled wood siding

Task One: Conditions Assessment

Site Context

The Artillery Barracks (Building #638) dominates the area, being only one of two large buildings in the West Barracks. The surrounding structures served as support buildings for the Artillery Barracks and its inhabitants. It serves as an anchor for the entire West Barracks facing Hathaway Road between McLoughlin Road and Barnes Road.

Vehicular Circulation

On street parking for the Artillery Barracks is located along Hathaway Road to the south of the building. It is also accessible by car from the north side alley between McLoughlin and Barnes Roads. There is a limited amount of parking available in the rear courtyard of the building.

Pedestrian Circulation

Two concrete walks extend from the Hathaway Road sidewalk to the front porch of the building. These walks are flanked by two stone piers that at one time had cannonballs sitting on top of them. The cannonballs are now being used as doorstops inside the building. The approaches to the west, east and north sides of the building are paved with asphalt. Four concrete stairs provide direct access to the basement. There are no ramps for ADA access.

Exterior Assessment

- Summary: Trim is relatively simple, but still more ornate than most of the buildings in the West Barracks. The details reflect the utilitarian nature of the colonial revival style provided for the standard military building plans.

- Site: Little effort has been made to direct runoff away from the building. The paved courtyard to the north has catch basins to collect the large amount of water from the impervious asphalt. Remnants of an historic dry well are located to the west of the front porch. This corresponds to a downspout from the roof. Other dry wells may exist but their presence has not been confirmed.

  Making this building accessible is challenging. There are significant elevation differences between the ground level, the first floor porches and the basement level. The first floor is also several inches above the porches. The exterior basement stairs have no handrails and there is biological growth on the concrete. The head clearance does not comply with code at the basement's north entrances due to the porch above.

- Foundation: The foundation is faced with quarry-faced three-height ashlar laid up in a random pattern with mortar joints tooled with a raised bead. The stone is stained with rust and biological growth in some locations and needs to be cleaned. It is in good condition requiring minor repairs in general. The stone flanking the basement entries shows some chipping, spalling, and deteriorating mortar.

- Walls: The walls are wood frame with painted bevel siding. In general, there is damage due to surface-mounted conduit and cabling and other items. Vents under the windows corresponding to radiator locations have been blocked. In general the siding is in fair condition requiring minor repairs.

- Windows: The typical two-over-two wood double hung windows are arranged in a symmetrical 1-2-1-3-3-1-2-1 pattern on the north and south elevations of the center wing. The windows are evenly spaced on the west and east wing elevations. The windows are generally in fair condition requiring minor repairs. The east and west wing gable ends have Palladian windows on the south side on the attic level. These are a prominent feature and are in good condition. The basement features wood hopper type three-lite windows and two-over-two double hung windows on the outside walls of the wings. There are a few windows at the southwest corner of the basement that have been filled in with CMU block.

- Doors: The exterior doors are generally wood five-panel doors with three-lite transom windows. The hardware is period hardware in fair to good condition. They occur in pairs and as single-leaf doors. They do not meet accessibility requirements. The basement doors and first floor doors on the north side are

paneled doors with multiple-lite windows that make them significant to the building. The exit doors on the second floor on the west and east elevations are flush, as is the basement door on the west elevation at the southwest corner. The doors to the boiler room and the basement door on the east elevation are in fair to poor condition and they do not close properly. Their hardware is damaged or missing.

- Trim: Door and window casings are flat, with projecting drip caps above and projecting sills. A belly band with wood 1x skirt board, drip cap and quarter round trim circles the building above the stone foundation. Cornerboards are flat stock and are in good shape generally requiring minor repair. There are damaged and modified sills in some locations.

- Roof, Gutters and Eaves: The eaves are boxed-in and the soffit boards are in poor condition requiring major repair at both the porch roofs and the main roof. The built-in gutters contribute to the overall character of the building and should be preserved and repaired. The downspout system is in poor condition. Many downspouts and leaders are not attached to the gutters at many locations and there is plant growth visible in the gutters. Corrosion is also evident in the metal components of the system. The downspouts drain to subsurface drain pipes, the condition of which is unknown. The structure has recently been re-roofed with asphalt composition shingles that are generally in good condition. The north porch roof, however, is not in good condition with biological growth and flashings that are in poor condition. Chimney flashing is poorly installed. The metal roof ventilators leak in a driving rain according to the Army Reserve maintenance crew. The design of the ventilators may allow this to happen. Some are no longer plumb and they all need to be re-painted.

- Porches and Stairs: The north and south porches are in fair condition overall. The T&G decking and the stair treads need to be replaced. The structure, however, appears to be newer and in good condition. The Tuscan columns and their painted cast-iron bases are in fair condition. They are sinking into the decking because of the deteriorated condition of the wood. The column pieces are separating in some places. The railings and handrails are cast iron pipe and in good condition, but do not comply with code. Their connections should be checked closely. The exiting railings on the west and east sides of the building are non-contributing, non-historic and do not meet code. The north porches, east and west sides, have non-contributing concrete docks. The structure of the north porches is older than the south side but appears to be in sound condition. Wood "X" railings are in poor condition and should be replaced. The wood stairs at the west porch should be replaced to code. The center porch on the north side has cast iron pipe railings, a portion of which has been altered. This porch interferes with proper head clearance at the basement entries below it.

- Miscellaneous: The doors are missing on the basement hatch entries but the hinge pins are still intact. The floor drains require testing and clean-out. The east elevation of the west wing has security bars on the windows. There are bird control issues as evidenced by the bird houses at some columns on the porches. Although historic and quaint, they are not being used well by the bird population. There is a need for cleaning up guano at the porch and other locations.

Interior Assessment - Basement

- General: Room designations are based on the 1952 floor plans by the Quartermaster's Office. The basement floor is scored concrete. The walls are painted stone with a wood base. The interior partition walls are lath and plaster. The interior stairs to the first floor are wood. The lath and plaster ceiling has been damaged by surface-mounted conduit and light fixtures. There are cast iron columns that have no base and an integral cap. There is exposed piping on the ceiling and ceiling radiators. The typical casing is 1x3.

- Room 'K': This room was originally the scullery. There are some partition walls that are not original as well as carpeting and other finishes that are also non-contributing. Some water damage is apparent at the east wall, corresponding with the location of the ramp on the exterior.

- Stair 'B': The stair has well worn wood treads and risers and does not meet current codes. The middle landing is narrowed by the thick foundation walls and not wide enough to meet current codes. The doorway is also too narrow because of the stone walls.

- Latrine 'B': An opening has been cut in the north wall from the scullery. The raised floor shower area doesn't match the one in Latrine 'A'. The urinals have been removed and the concrete floor patched. Portions of the base are damaged or do not match at this location. The bathroom in the northwest corner is non-contributing and should be removed. A window on the west side has been removed and filled in.

- Stair Hall 'B': The stair hall steps down 14" with one wood tread to the latrine area. This will present a challenge making the space accessible. The base is concrete. The concrete stair to the first floor does not comply with current codes.

- Room H: There is minor water damage at the exterior foundation walls.

- Room I: This is the boiler room for the 'B' side of the barracks. The boiler is intact. The interior stairs do not comply with current codes. The landing and door need to be repaired.

- Stair Hall 'A': The stair hall steps down 14" with one wood tread to the latrine area. This will present a challenge making the space accessible. The base is concrete. The concrete stair to the first floor does not comply with current codes.

- Rooms 'G' and 'P': These rooms were used as supply rooms and are filled with metal cages and a small room with insulated partition walls for refrigeration.

- Room 'F': This is the boiler room for the 'A' side of the barracks. The boiler is intact. There is a CMU partition wall in the room with no access from the inside. It was not accessible. The windows in rooms 'D' and 'E' have been filled in as well.

- Latrine 'A': The floor of the shower area is raised about 4" and enclosed with stone slabs with a drain in middle of the floor. The plumbing fixtures and layout of the room are intact except for the north wall where half of the toilets have been removed for a new doorway to Room 'A'. The fixtures still have nickel-plated controls and faucets.

  Room 'A': There is water damage in the northeast corner of the room on the walls and the floor, and there is efflorescence on the walls. There is also water damage to the plaster ceiling.

  Stair 'A': The stair hall steps down 14" with one wood tread to the latrine area. This will present a challenge making the space accessible. The base is concrete. The concrete stair to the first floor does not comply with current codes.

Interior Assessment - First and Second Floors

- General: Room designations are based on the 1952 floor plans by the Quartermaster's Office. The floors are originally 2 1/2" wood strip flooring or sheet linoleum but all are covered with 12" square resilient floor tile over a fiberboard underlayment. A vinyl cove base has been glued to the original wood base. The walls are lath and plaster. The newer partition walls are gypsum wall board. The windows are painted wood sash with painted wood trim and sills. The window casing is half-round and the apron is a large quarter-round profile. On the second floor the window apron is 1x flat stock. The original interior doors that are five-panel wood doors with a three-lite transom, many of which are no longer operable. Many other doors are non-contributing. The door casing is half-round, as is the chair rail in many rooms. The ceiling on the first floor is painted pressed tin tile and cornice. The ceilings on the second floor are lath and plaster. The original light fixtures have been replaced with fluorescent fixtures, but some of the original fixture canopies remain in place. There is a significant amount of surface-mounted conduit and other items that are not contributing to the original character of the building. Cast–iron columns and beams "boxed out" in painted

wood are in the large open rooms. The ornamental cast-iron grilles and louvers of the natural ventilation system are unique and in varying conditions. The stamped metal radiators are original.

- Significant Features and Typical Materials: The Palladian windows in the south gable ends of the wings and the intact latrine on the west side are significant. The multi-lite windowed doors at the north entries of the first floor and basement are also significant as they would be hard to replace in kind. The shooting ranges in the attics and the graffiti on the ventilation ducts in the attic from 1916 are artifacts of relevance to the building's history.

- Typical conditions: In general, the condition of the original flooring is unknown. There are some floor locations that have water damage. The wood base is damaged by the vinyl cove being glued directly to it. Cracking in the plaster walls is mostly hairline cracks. The walls and ceiling have been damaged by the attachment of surface-mounted conduit, light fixtures and other items. Some rooms have a wainscot with painted T&G bead board, a flat panel with battens, or fake wood paneling. The windows and doors are generally in good condition, although most transom windows are no longer operable, and in some cases, the glass has been painted. The pressed tin ceiling has a significant amount of peeling paint and separating joints. In many cases the surface attachment of conduit and similar items has pulled the tiles away from the ceiling substrate.

- Special or Unusual Conditions: The natural ventilation system works best with the open floor plan in the large rooms. The attics are unfinished and contain the ductwork for the ventilation system and the shooting ranges.

- Room 117: The base of one of the columns is missing.

- Rooms 113 and 114: The chair rail has been removed. The original partition dividing these rooms has been removed. A ghost of the original door location is visible on the east wall. The flue between these two rooms has been removed.

- Rooms 115 and 116: The original partition dividing these rooms has been removed. A bathroom has been installed in the former closet, and the west wall furred out for plumbing. It is big enough to provide ADA access should it remain a bathroom.

- Stair 'B': The stair does not meet current codes. There is no handrail, and the guardrail height and spindle spacing are not in compliance. Some spindles have been replaced, and the new ones do not match the profile of the originals.

- Room 112: The base of a cast iron column is missing. A ventilation grille is covered. Southwest and southeast columns are furred out because of partition walls. The north doorways, to Room 111, are filled in.

- Room 112 Vestibule: A partition wall has been added on the west side at the top of the stairs directly on an original light fixture location.

- Room 111 Bathroom: The floor is water-damaged. There are smoke stains on the north wall and ceiling. The top vent on the northwest corner chase has been covered.

- Room 110: There is water damage visible on the floor and wall at the north end of the room. The plaster on the east wall has lost its key.

- Room 107: The plaster on the east wall has lost its key.

- Room 106: The wainscot is modern era fake wood paneling. The chimney has been removed.

- Entry and Stair Hall 'A': There is a cap on the wood base. The storage closets are located on either side of the entry that are not original and appear to be ad hoc additions.

- Stair 'A': The stair does not meet current codes. There is no handrail, and the guardrail height and spindle spacing are not in compliance. Some spindles have been replaced, but the new ones do not match the profile of the originals. There is an approximately 25 square foot loss of plaster on the underside of the stair.

- Room 105: The original flooring may be asbestos tile underneath the fiberboard underlayment and resilient floor tile. There is damage at the west end of the floor. Places where the paint is chipped on T&G V-groove panel wainscot reveals a nice dark stain and lacquer. Strip paint and refurbish original finish.

- Room 104: The walls have a T&G V-groove wainscot with a half round cap. It is painted but places where the paint is chipped reveals dark-stained wood with a clear finish. The storage closet is non-contributing. Two of the windows have safety glass. The casing in this room is flat stock.

- Room 101: There is a bump in the floor in the east room (restroom). The base and chair rail are missing in the northeast corner room.

- Room 201: There is an approximately 64 square foot loss of plaster in the southwest corner of the room. There are additional partition walls and an added doorway to Room 205.

- Room 205: There are added doorways to Room 201 and Room 204.

- Room 204: There is damage to the floor at the south end of the room. There is an added doorway on the east wall.

- Room 203: There is an added doorway on the east wall.

- Stair 'A' to Attic: The stair has wood treads and risers. The handrail and guardrail do not meet current codes.

- Room 206: Water damage is visible on the floor at radiator locations.

- Room 207: There is a hole in the wall and about a 64 square foot loss of plaster in ceiling and loose plaster key east of the hole.

- Room 210: There is fake wood paneling wainscot and no base.

- Rooms 208 and 209: The ceilings have textured plaster on them, presumably to cover up plaster cracks.

- Stair 'B' to Attic: The paint is peeling on the wall and there is cracking in the plaster. The stair has wood treads and risers. The handrail and guardrail do not meet current codes.

- Room 212: There is an approximately 100 square foot loss of plaster in the northwest corner of the room. There is some cracking and some loss of key.

Electrical Evaluation

- Service: Overhead conductors from the site overhead power distribution system supply 2 electrical services in separate locations. Service entrance conductors are installed in conduit. Equipment for each service is circuit breaker type, 120/240-volt, 1-phase, 3-wire, 400-ampere. Equipment is in good condition. The 2 services in one building is a violation of the National Electrical Code.

- Power Distribution System: Each service supplies 3-200 ampere feeders to 3 branch circuit panels. The branch panels are in good condition.

- Wiring: Wiring methods are a mixture of very old type R copper wire installed in metallic conduit, MC cable, non-metallic sheathed cable and surface metal

raceway containing modern thermoplastic insulated copper wire. Older type wiring is in poor condition. Wiring in surface raceway is in fair condition.

- Wiring Devices: Receptacles consist of a mixture of older non-grounding and newer grounding type. Newer receptacles are supplied by the surface raceway wiring. Older devices are in poor condition and newer are fair condition.

- Lighting: The majority of light fixtures are 8' slim line fluorescent equipped with old T-12 technology lamps. Fixtures are in poor condition.

- Fire Alarm: Control panel is non-addressable, Silent Knight 5207/5204. Initiation devices consist of manual pull stations located at exits and heat detectors in most rooms. Alarm bells and spacing fail comply with code required audio/visual notification.

- Telecommunications: Service is overhead wiring. Distribution consists of non-category rated wiring from 66 type terminal blocks to various surface mounted outlets located throughout the building. Wiring and components are in poor condition and are not in compliance with current standards for modern data telecommunications functions.

- Emergency: Exits are identified with non-emergency illuminated signs that are insufficient in quantity and in poor condition. No emergency egress lighting.

- Recommendations: Demolish and replace all electrical systems.

Mechanical Evaluation

- Description: A steam radiator system heats the building. The steam serving this building is generated by a boiler in the Basement Mechanical Rooms located at each side of the building. The steam piping is carbon steel and appears to be the original installation. The steam radiators appear to be in fair to good condition. The radiators have a control valve at the top for temperature regulation. This is a single pipe steam system with no separate condensate return. There are several shafts that start at the first floor level with a grille at the base and top of each floor and route up to the attic where they connect to ductwork that extends up through the roof. This system pulls in outside air and provides natural ventilation into the open spaces through stack effect. Exhaust fans were recently installed in the main ductwork to provide air circulation throughout the building in its unoccupied state.

- Recommendations: The boilers in this building were upgraded in 1989 and should be adequate as is. The steam radiators could be refurbished for re-use. Re-use of these radiators would help maintain the historical character of the

building. New control valves are recommended to provide temperature control of the space. The steam piping should be replaced, as it is near the end of its useful life. We also recommend converting to a steam condensate system from the single pipe system to improve temperature control. For ventilation, operable windows and the use of the existing natural ventilation shafts would provide adequate ventilation and meet current code requirements as long as the interior is not significantly partitioned. Exhaust fans will be required in areas such as restrooms, storage rooms, and the janitors closet for ventilation purposes.

Plumbing Evaluation

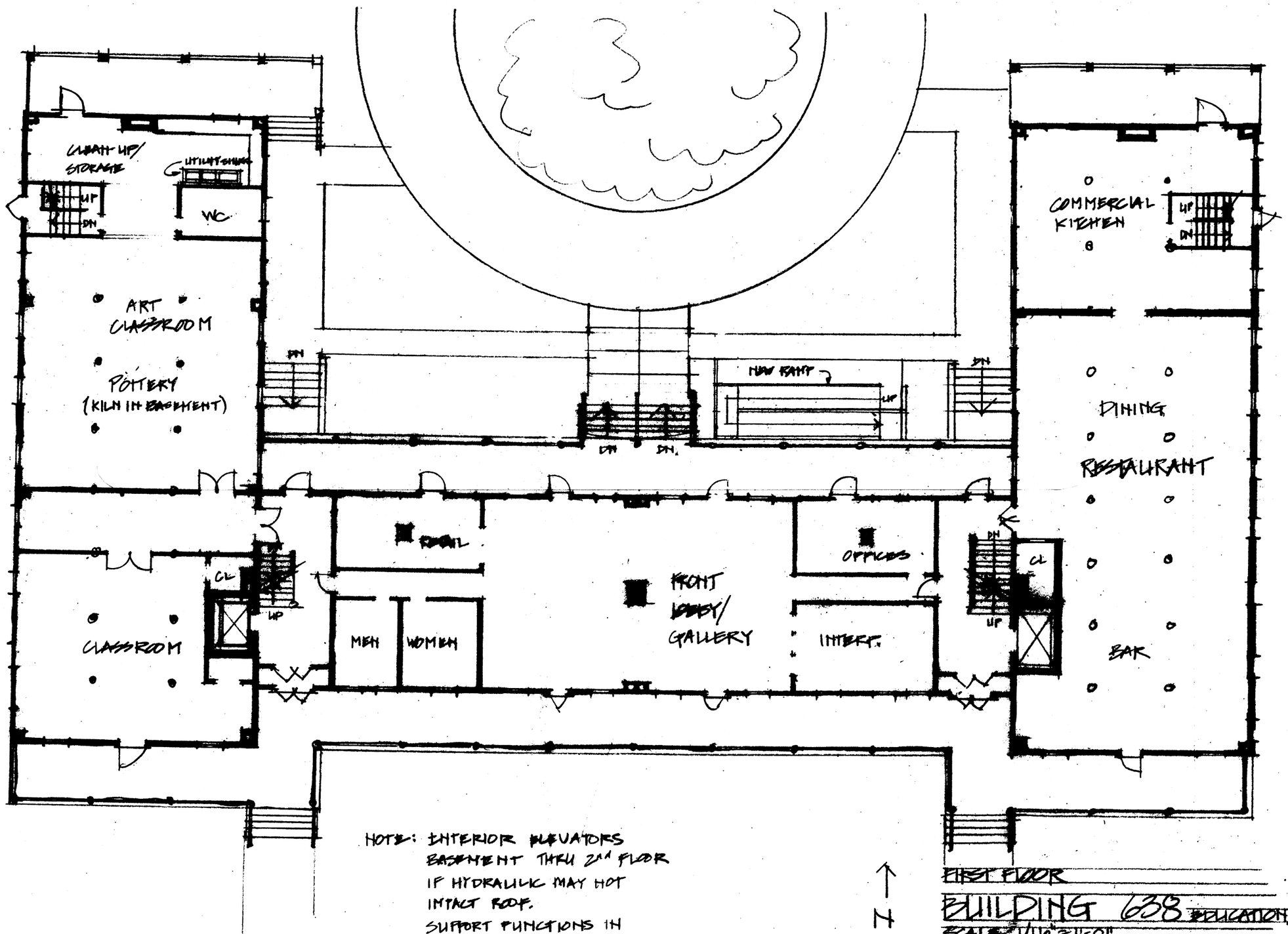
- Description: Existing plumbing fixtures are in fair to poor condition. Existing waste piping is cast iron. The existing domestic water piping is carbon steel. The Basement level was previously used as bath/shower/toilet facilities for barracks occupants. Fixtures are in poor condition and do not have proper supply and waste piping connections. To provide freeze protection during this unoccupied time, the domestic water has been drained and shut-off at the building. The gas service has been shut-off as well.

- Recommendations: Depending on the building usage, the restrooms may need to be reconfigured to be in accordance with ADA requirements. This may change fixture layout. Restoring the existing plumbing fixtures would not add much to the historical value. New fixtures are recommended as the cost for new will probably be less than refurbishment costs. Fixtures should be ADA compliant to conform to current codes. New copper piping should be installed to replace existing domestic carbon steel piping since it is probably nearing the end of its useful life. The water heater is recommended to be replaced due to the age of the heater, change in fixture demand and the deleterious effects of intermittent use.

Task Two: Ultimate Treatment and Use

The Artillery Barracks (Building #638) is an excellent candidate for exterior restoration according to the *Secretary of Interior's Standards* and interior rehabilitation. The *West Vancouver Barracks Reuse Plan* suggests that this structure will serve as the anchor for the arts and education uses to be located on the West Barracks (See Plan A). This takes advantage of the large open rooms of the original floor plan. The natural ventilation system will also function best with an open floor plan. Any tenant in the larger rooms should use low walls, cubicles and office furniture systems to subdivide the space as needed.

The Artillery Barracks is currently divided in half, with a separation wall running north to south in the middle of the center wing of the building. Because of the symmetrical floor plan and the two distinct sides of the building it would seem that it would be necessary to

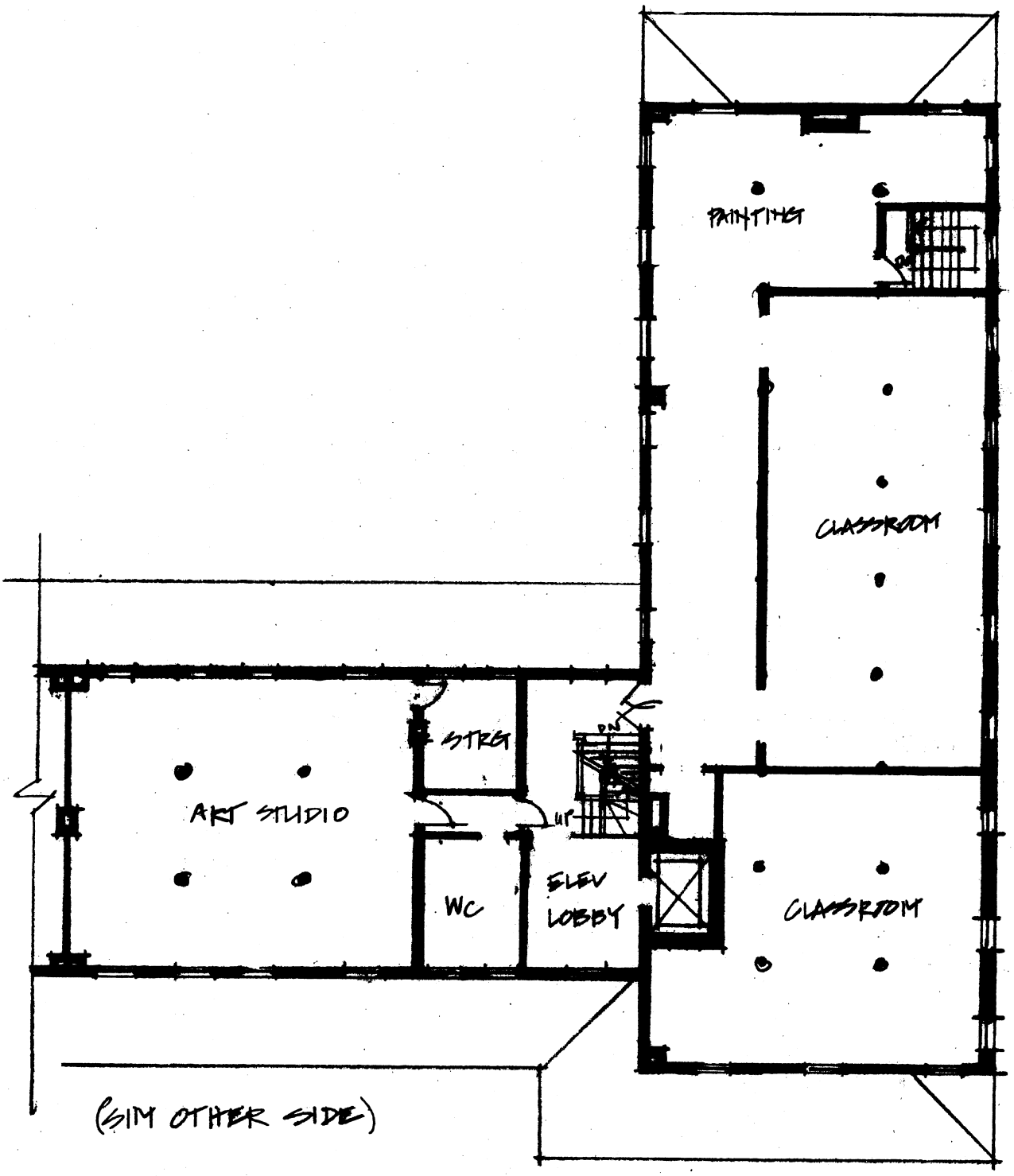


FIRST FLOOR

BUILDING 638 EDUCATION/ARTS

SCALE: 1/16"=1'-0"

PLAN A



SECOND FLOOR

NOTE: CLASSROOM SPACES BREAK UP OPEN ROOM PLAN, BUT NOT AS BAD AS OFFICE USE. TRANSPARENT MATERIAL AT TOP OF PARTITION WALLS WILL MAINTAIN FEELING OF ONE LARGE ROOM.

duplicate changes, i.e. install two elevators, one at each entry, as opposed to just one for the whole building. According to the *Uniform Building Code* (UBC), however, the structure can meet the area allowed for this type of structure without an area separation wall. This would create the opportunity to revise the circulation, allowing one elevator to serve the entire building.

The large stairs in the center wing of the building can serve as the primary exits for the basement and the upper floor. Two exterior metal stairs provide additional exits from the second floor of the east and west wings. These stairs should be removed, and the interior northwest and northeast stairs extended up to the second floor and brought up to meet current codes.

Extensive remodeling would be required to make the basement accessible. A false floor in the latrine area 'B' would be one solution. This would be the only space capable of functioning as office space. The other rooms would be best utilized as support spaces, mechanical rooms, and storage areas.

The Class 'C' cost estimate for an arts/education use for the year 2003 is $72.22 to $86.44 per square foot. Code upgrade would be an important part of this cost. It also includes minimal interior changes for a range of arts and educational uses and media, which may include from pottery and painting studios to a foundry.

Exterior Character Defining Features (From Part One of the HSR)

- Building Form, Shape, and Massing: A long rectangular building with two rear projecting wings.

- Roof Shape and Elements: H-shaped roof with symmetrical gables on either side of the north elevations, gable roofs have end returns, five chimneys with corbeled caps, and metal roof vents.

- Exterior Surfaces: Horizontal wood bevel siding, exposed roof rafters inside front porch.

- Fenestration Pattern: Two-over-two double-hung wood-frame windows, three-lite and six-lite transoms, Palladian window of four-lite fixed with two-over-two arched windows and keystone at the east and west ends of the south elevation, three-over-three double-hung windows at foundation level, four-lite windows at gable ends at north elevation.

- Moldings: Simple door and window surrounds, picture-rail type molding along inside entablature of front porch, decorative frieze below roof line.

- Doors: Single and double five-panel doors, fleur-de-lis hardware at south elevation, double doors at east elevation.

- Porches: Front porch at south elevation, thin columns with Doric capitals, metal pipe railing, tongue-and-groove wood flooring, cross-member railings at north elevation porch.

- Foundation Elements: Ashlar-faced stone foundation with beaded mortar joints, stone basement stairs at east elevation, underneath porch is exposed at south elevation due to lack of foundation skirting.

Exterior Recommendations

- Vehicular Circulation: Provide additional on-street parking on Hathaway Road.

- Pedestrian Circulation: Bring the walks up to code and repair and clean concrete sidewalks.

- Site: Re-grade the surrounding area to slope away from the building or provide a substantial perimeter drainage system to direct surface water away from structure. Removal of paved surface to the east may be necessary when lowering grade. The dry well remnants should be preserved as an example of early 20th century military life.

- Foundation: Clean stone and re-point. New pointing should match existing beaded mortar joint.

- Walls: Repair holes and other damage related to surface-mounted conduit and cabling. Scrape and paint siding. Re-paint with historic color scheme. Either restore vents under windows to working order, or remove boxes and patch permanently. They should only be restored if the radiators are re-used. The fresh air coming into the building through the vent will be heated by the radiator and warm the air next to the window. If the HVAC system is changed then the vent should probably be patched permanently.

- Windows: All windows are significant to the character of the building. Restore all to proper working order. Provide screens for the basement windows and under the porches to keep animals out. Re-open and replace windows at the southwest corner of the basement to restore historic character.

- Doors: Refurbish doors and hardware. Repair doors to full operation and to meet current codes if possible. Flush doors should be replaced with period-appropriate doors. New doors should resemble historic doors as closely as possible.

- Trim: Repair damaged and modified sill elements. Replace damaged trim, especially corner boards. Scrape and paint trim.

- Roof, Gutters and Eaves: Evaluate waterproofing of built-in gutter system. Replace gutter and downspout system prior to repairing eaves. Consideration should be given to replacing the roof with the historic roof materials: metal roof on the porches and slate shingle on the main roof. New chimney flashing is needed. The ventilators should be re-set on the roof and prepped and painted. Monitor flashed areas for leaks and repair as required.

- Porches and Stairs: Replace decking and provide additional blocking to strengthen deck. Restore wood porch columns and prime cast iron bases prior to re-installation. Re-paint all. Replace wood stairs to code. Cast iron pipe railings are historic material and should be saved and maintained. Metal exiting stair assembly on the west and east sides of the building should be removed with the introduction of an interior exiting stair enclosure from the basement to the second floor. Repair and replace railing on the north porch. Rebuild stair and wood cross member railings at the northwest porch. The railing might be rebuilt as it is if the height of the porch from grade does not exceed 30". The basement stair needs to be redesigned for head clearance and code while incorporating ramping for increased accessibility.

- Miscellaneous: Remove security bars from basement windows. Bird control options should be explored. Replace hatch doors at basement entries not reused as exits. Clean drains and test.

Interior Character Defining Features (From Part One of the HSR)

- Floor Plan: Original floor plan still extant, large open rooms on the 2nd level, unfinished attic space, intact latrine in basement with urinals, sinks, wash basins.

- Original volume and proportion of rooms.

- Original ceiling height in some areas.

- Stairs: Wide wooden staircase with decorative newel posts, turned balusters and drop finials.

- Moldings: Tall base boards, picture railings, simple door and window casings.

- Interior Finishes: Plaster walls, pressed tin ceilings, exposed cast iron columns, chair rails, vertical wood paneling.

- Interior Doors and Windows: Five-panel doors, five-lite and six-lite transoms.

- Unique Fixtures or Appliances: Air vent ductwork in attic, decorative metal heating grates.

Interior Recommendations

- General: The interior floor plan is still intact except for the addition of some partition walls and relocation or addition of some doors. Additional exit stairs are required from the east and west wings if the exterior metal stairs are removed. The existing stair from the basement to the first floor should be rebuilt and extended up to the second floor. The stairs in the main center wing should be updated as well, with particular attention paid to the basement run where the doors are right on the top tread of the stair. All stairs need to be placed in fire rated enclosures. The building needs to evaluated by a structural engineer. Some of the brick chimneys may need to be braced. Water damaged areas should be investigated and infiltration corrected. Historic paint colors should be used for the interior.

- Specific Space with Unique Treatment: Latrine 'A' is an intact example of the original military latrine and should be preserved.

- Typical: Remove vinyl tile and cove base. Restore floors to original material. Repair plaster walls and ceilings. Repaint stone walls in basement. Remove partition walls. Repair, restore pressed tin ceilings. Remove fluorescent light fixtures and replace with period-appropriate light fixtures at original fixture locations and/or appropriately located to suit the period. Remove surface mounted conduit and cabling and run in-wall prior to repairing the plaster. Restore wainscot and trim to original state (stained) where applicable.

Task Three: Requirement for Treatment

Compliance with Codes

Uniform Building Code (UBC):

- Proposed Use: Arts and Education (classrooms, and offices).
- Occupancy Proposed: Mixed A-3 (assembly) and B (office).
- Construction Type: V-one hour (wood frame, one hour fire-rated). Fire rating is based on the installation of automatic fire sprinklers.
- Base Area / Stories Permitted: 10,500 S.F. / 2 stories.
  (+100%) 10,500 = 21,000 S.F. (multistory bonus)
  (+50%) 10,500 = 31,500 S.F. (separation on four sides estimated at 30 feet)
- Building Area: 26,678 S.F. for upper 2 stories over 13,338 S.F. basement.
- Occupancy Loads: Vary according to use.
  Basement: Storage / Mechanical (13,338 S.F.) 45 persons

Main Floor: 100% Office (13,338 S.F.) 134 persons
Main Floor: 60% Classrooms (8,000 S.F.) 400 persons
Main Floor: 40% Office (5,338 S.F.) 54 persons
Upper Floor: 100% Office (13,338 S.F.) 134 persons
Upper Floor: 100% Classrooms (13,338 S.F.) 667 persons

- Exits Required: 2 required; 4 provided.
- Upper Floor Exits: 2 required. Exit width varies according to occupancy load.
- Crawlspace Ventilation: Verify.
- Attic Ventilation: Verify.
- Stairs and Handrails: Upgrade as required to comply with current codes.
- Decks and Guardrails: Upgrade as required to comply with current codes.
- Plumbing: UBC Table 29-A.
  First and Second Floor: Separate restrooms on each floor with 4 W.C.'s and 2 lavatories minimum in each for 100% office use. Larger restrooms would be required for other mixes of uses.
- Structural: Needs structural assessment.

Americans with Disabilities Act (ADA):

- In general, ADA requires existing structures to be brought into compliance with the provisions of the current code. Chapter 9, Section 1113 of the Washington State Amendments to the UBC allows Building Officials some amount of discretion dealing with historic structures. There are a number of challenges to making this building accessible. The main floor is set three to four feet above ground level, with another step up from the porches to the interior. Ramps from grade will be relatively long, and should be located to the rear courtyard closer to dedicated parking and on the higher side of the building. It may also be possible to provide direct access to the basement. Internal vertical transportation will have to be by a new elevator.

Uniform Mechanical Code (UMC):

- Mechanical: See mechanical assessment.

National Electrical Code (NEC):

- Electrical: See electrical assessment.
- Data: See electrical assessment.
- Security: No security system is present, however, provisions should be made for future installation.

National Fire Protection Association Standards (NFPA):

- Fire Protection System: Needs assessment; automatic fire sprinklers are not installed.

Washington State Energy Code (WSEC):

- In general, WSEC requires alterations to existing structures to comply with the provisions of the current code. Section 101.3.2.2 of the WSEC allows Building Officials some amount of discretion dealing with structures on the National Register of Historic Places. It should be relatively easy to bring this building into compliance, given that the interior generally lacks historic significance, and that the attic and the basement provide framing cavities for insulation. The existing windows, however, are contributing elements to the significance of the structure in the context of the West Barracks and should be rehabilitated.

Hazardous Materials:

- A complete survey of hazardous materials present in the building needs to be conducted prior to commencing any work. Of particular concern is the possible presence of lead paint and asbestos.

Functional requirements (program) suitability with Secretary of Interior's Standards

- Exterior: The Artillery Barracks (Building #638) has historic significance as an individual structure. This structure most recently served as the headquarters for the Vancouver Barracks housing the administrative functions for the base. In the past, it served as the largest of the barracks providing housing and services for the soldiers stationed there. With its prominent size and location within the West Barracks, the Artillery Barracks is significant as an example of the military architecture of the era, and as a contributing part of a coherent ensemble of buildings.

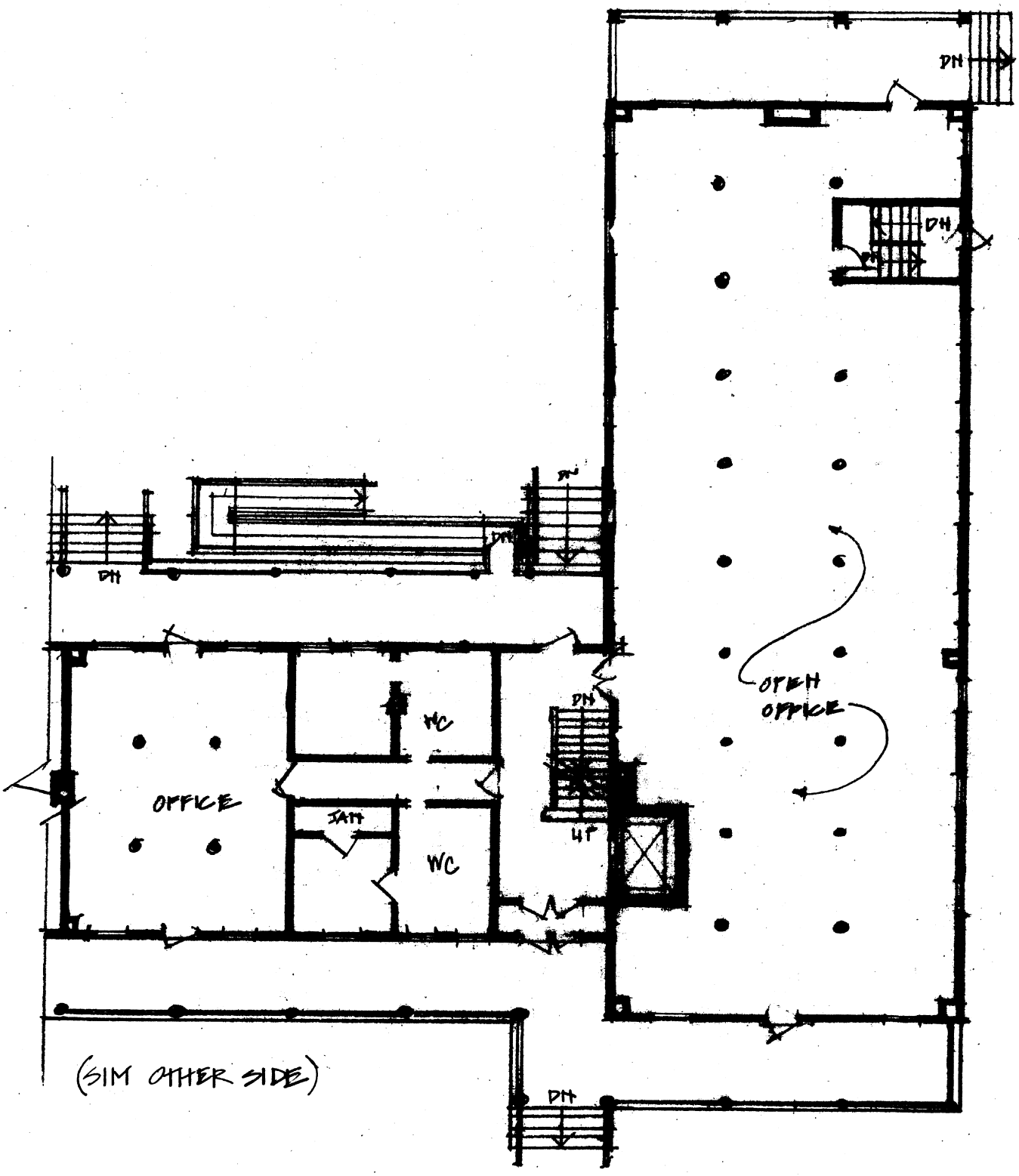
  The proposed change of use from a barracks and office space to serve as the new anchor for the proposed arts and education uses has minimal impact on the historic character of the exterior. Necessary changes to existing porches, ramps and stairs are to non-contributing elements, and should be undertaken in such a manner as to complement the historic character of the entire West Barracks.

- Interior: The proposed renovation of the Artillery Barracks (Building #638) should have minimal impact on the historic character of the interior. Because of its importance, original walls and finishes should be preserved whenever possible. New finishes should match the existing. Window and door trim should be preserved and can serve as patterns for new trim as it is installed. Other original materials such as wood flooring and plaster surfaces should be preserved to the extent practicable. Necessary changes to non-historic interior partitions, mechanical and electrical systems, and the restroom layout can be made, within this context, to allow the structure to continue to serve as a part of the fabric of the West Barracks.

Task Four: Alternative Treatments

While the Artillery Barracks will clearly play an important role in the reuse of the West Barracks, it may be some period of time before a proposed arts and education function could fully utilize the large amount of floor space in this building. As an interim use, spaces not fully utilized could be leased to other businesses providing immediate income to offset renovation and maintenance costs. In this way the building could become a business incubator, until the space is needed for the primary tenant (See Plan B). Both the interior and exterior impacts should be similar to those of the proposed arts and education use. No additional changes should be required for the exterior, and any additional changes to the interior should be limited to the installation of low walls or cubicles to partition the larger rooms into individual work stations. As with the arts and education use, any changes to the larger rooms should be easily reversible and strive to maintain their open character.

The Class 'C' cost estimate for an office use for the year 2003 is $72.22 per square foot. Code upgrade would be an important part of this cost. It also includes the creation of interior partition walls to allow for a variety of sizes of businesses.

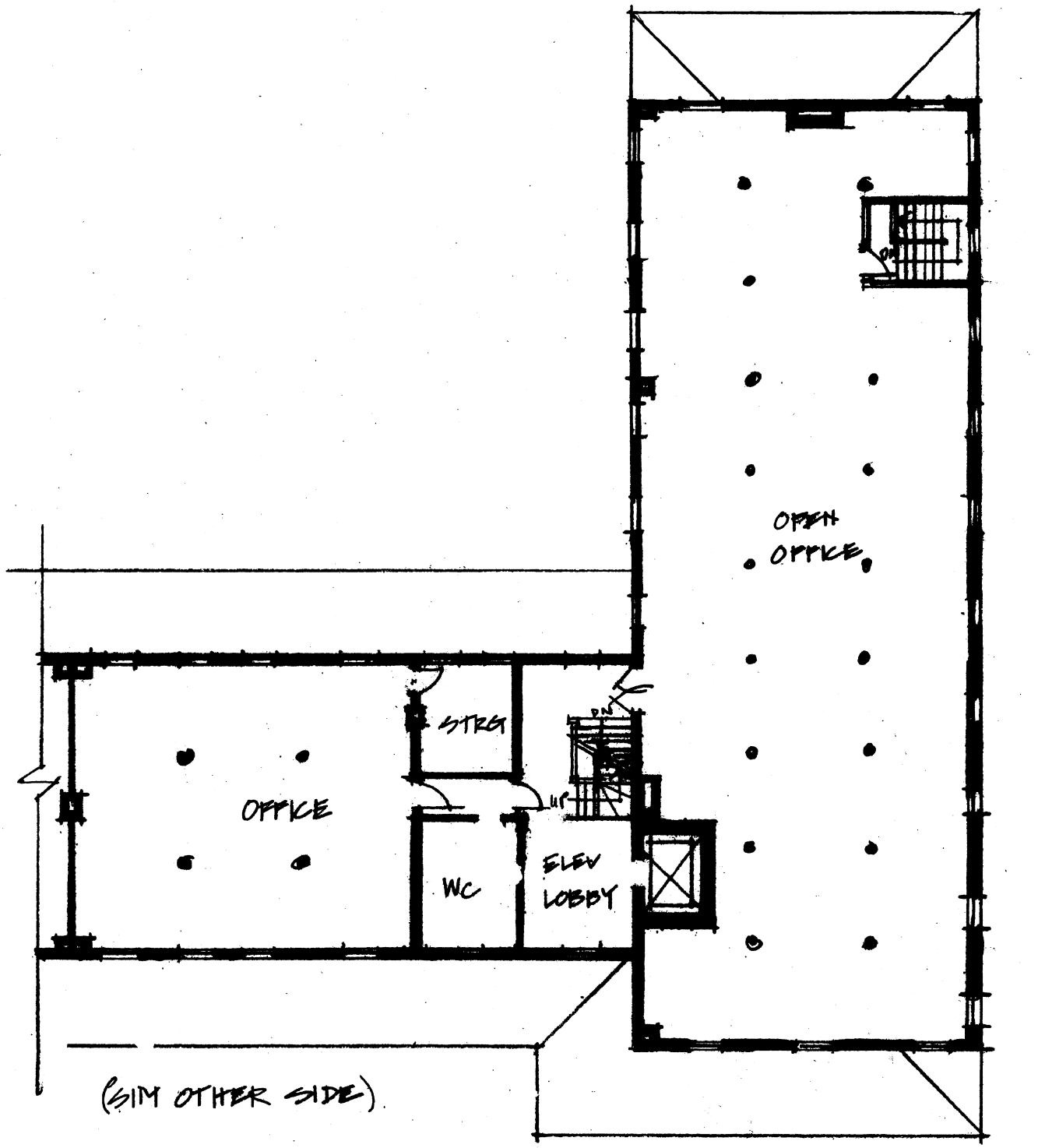


FIRST FLOOR

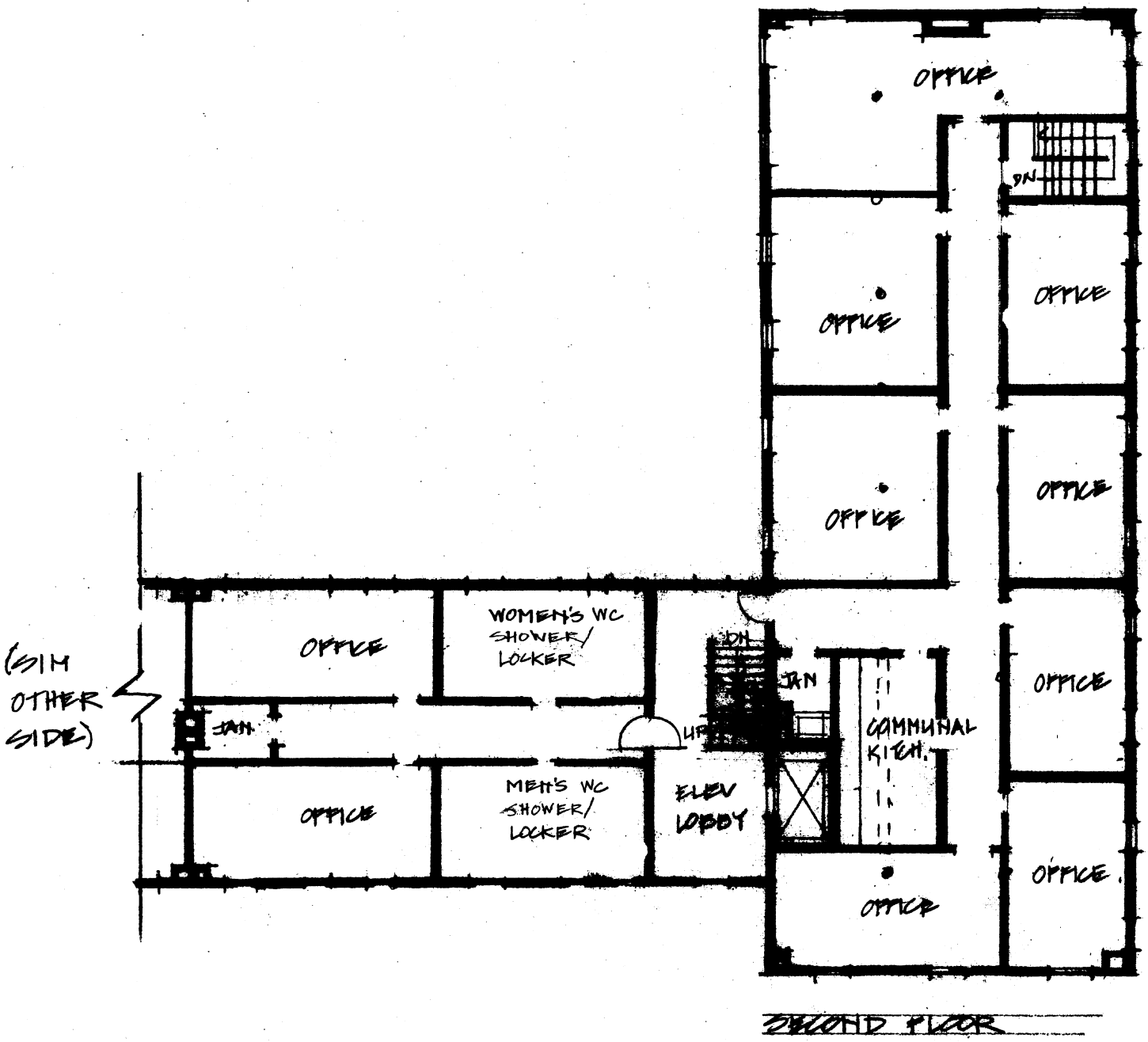
BUILDING 638 OFFICE

SCALE: 1/16" = 1'-0"

PLAN B

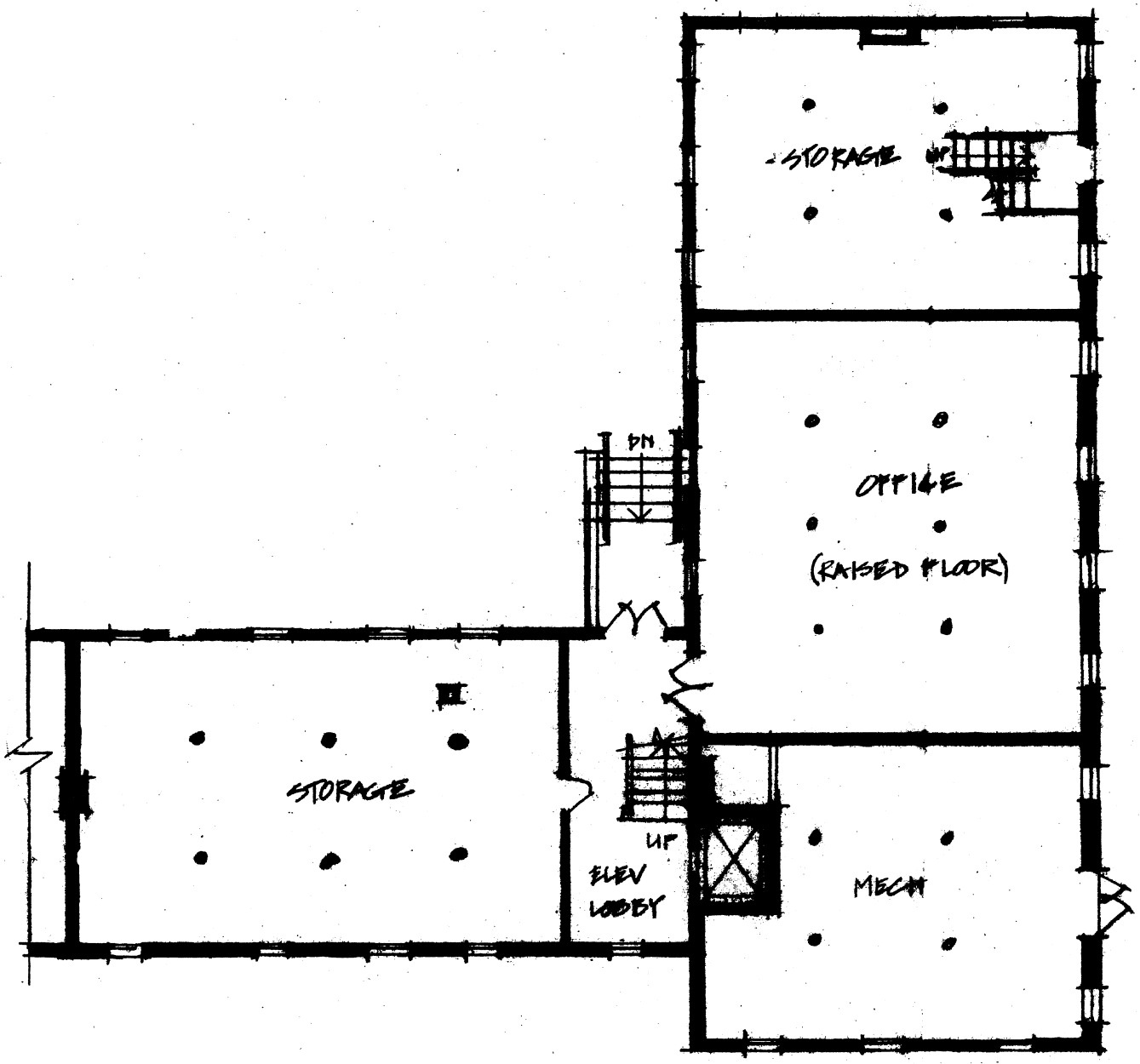


SECOND FLOOR



SECOND FLOOR

NOTE: SMALLER INCUBATOR OFFICE SPACES BREAK OPEN ROOM PLAN


STORAGE
UP
DN
OFFICE
(RAISED FLOOR)
STORAGE
UP
ELEV
LOBBY
MECH

BASEMENT